

RAW SEQUENCE LISTING

**The Biotechnology Systems Branch of the Scientific and Technical
Information Center (STIC) no errors detected.**

Application Serial Number: 10/563,888A
Source: IFWO
Date Processed by STIC: 7/5/06

ENTERED



IFWO

RAW SEQUENCE LISTING

DATE: 07/05/2006

PATENT APPLICATION: US/10/563,888A

TIME: 13:54:48

Input Set : A:\SEQLIST.TXT

Output Set: N:\CRF4\07052006\J563888A.raw

4 <110> APPLICANT: Chi-Hong B. Chen
5 Ralf Landgraf
7 <120> TITLE OF INVENTION: APTAMERS TO HUMAN EPIDERMAL GROWTH
8 FACTOR RECEPTOR-3
10 <130> FILE REFERENCE: 30448108USWO
12 <140> CURRENT APPLICATION NUMBER: 10/563,888A
13 <141> CURRENT FILING DATE: 2006-01-09
15 <150> PRIOR APPLICATION NUMBER: 60/488,679
16 <151> PRIOR FILING DATE: 2003-07-18
18 <150> PRIOR APPLICATION NUMBER: PCT/US04/23039
19 <151> PRIOR FILING DATE: 2004-07-16
21 <160> NUMBER OF SEQ ID NOS: 20
23 <170> SOFTWARE: FastSEQ for Windows Version 4.0
25 <210> SEQ ID NO: 1
26 <211> LENGTH: 4026
27 <212> TYPE: DNA
28 <213> ORGANISM: Homo sapiens
30 <400> SEQUENCE: 1
31 atgagggcgca acgacgctct gcaggtgctg ggcttgcttt tcagcctggc cgggggctcc 60
32 gaggtgggca actctcaggc agtgtgtcct gggactctga atggcctgag tgtgaccggc 120
33 gatgctgaga accaatacca gacactgtac aagctctacg agaggtgtga ggtggtgatg 180
34 gggaaccttg agattgtgct caggggacac aatgccgacc tctccttctc gcagtggatt 240
35 cgagaagtga caggctatgt cctcgtggcc atgaatgaat tctctactct accattgccc 300
36 aacctccgcg tgggtgcgag gaccacggct tacgatggga agtttgccat ctctgctcatg 360
37 ttgaactata acaccaactc cagccacgct ctgcgcagc tccgcttgac tcagctcacc 420
38 gagattctgt caggggggtgt ttatatagg aagaacgata agctttgtca catggacaca 480
39 attgactgga ggggactcgt gagggaccga gatgctgaga tagtggtgaa ggacaatggc 540
40 agaagctgtc cccctgtgca tgaggtttgc aaggggcgat gctgggggtc tggatcagaa 600
41 gactgccaga cattgaccaa gaccatctgt gctcctcagt gtaatggtca ctgctttggg 660
42 cccaacccca accagtgtct ccatgatgag tgtgccgggg gctgctcagg ccctcaggac 720
43 acagactgct ttgcctgccg gcacttcaat gacagtggag cctgtgtacc tcgctgtcca 780
44 cagcctcttg tctacaacaa gctaactttc cagctggaac ccaatccca caccaagtat 840
45 cagtatggag gagtttgtgt agccagctgt ccccataact ttgtggtgga tcaaaccatcc 900
46 tgtgtcaggg cctgtcctcc tgacaagatg gaagtagata aaaatgggct caagatgtgt 960
47 gagccttgtg ggggactatg tcccaaagcc tgtgaggga caggctctgg gagccgcttc 1020
48 cagactgtgg actcgagcaa cattgatgga tttgtgaact gcaccaagat cctgggcaac 1080
49 ctggactttc tgatcacggc cctcaatgga gaccctggc acaagatccc tgccctggac 1140
50 ccagagaagc tcaatgtctt ccggacagta cgggagatca caggttacct gaacatccag 1200
51 tcttgccgcg cccacatgca caacttcagt gttttttcca atttgacaac cattggaggc 1260
52 agaagcctct acaaccgggg ctctctcattg ttgatcatga agaacttgaa tgtcacatct 1320
53 ctgggcttcc gatccctgaa ggaaattagt gctgggcgta tctatataag tgccaatagg 1380
54 cagctctgct accaccactc tttgaactgg accaaggtgc ttcggggggc tacggaagag 1440
55 cgactagaca tcaagcataa tcggccgcgc agagactgcg tggcagaggg caaagtgtgt 1500

RAW SEQUENCE LISTING

DATE: 07/05/2006

PATENT APPLICATION: US/10/563,888A

TIME: 13:54:48

Input Set : A:\SEQLIST.TXT

Output Set : N:\CRF4\07052006\J563888A.raw

```

56 gaccactgt gctcctctgg gggatgctgg ggcccaggcc ctggtcagtg cttgtcctgt 1560
57 cgaaattata gccgaggagg tgtctgtgtg acccactgca actttctgaa tggggagcct 1620
58 cgagaatttg cccatgaggc cgaatgcttc tcctgccacc cggaatgcca acccatgggg 1680
59 ggcactgcca catgcaatgg ctgggctct gatacttggtg ctcaatgtgc ccattttcga 1740
60 gatgggcccc actgtgtgag cagctgcccc catggagtcc taggtgccaa gggcccaatc 1800
61 tacaagtacc cagatgttca gaatgaatgt cgccctgcc atgagaactg caccaggggg 1860
62 tgtaaaggac cagagcttca agactgttta ggacaaacac tgggtgctgat cggcaaaacc 1920
63 catctgacaa tggctttgac agtgatagca ggattggtag tgattttcat gatgctgggc 1980
64 ggcacttttc tctactggcg tgggcgccgg attcagaata aaagggtat gaggcgatac 2040
65 ttggaacggg gtgagagcat agagcctctg gaccccagtg agaaggctaa caaagtcttg 2100
66 gccagaatct tcaaagagac agagctaagg aagcttaaag tgcttggtc ggggtgtctt 2160
67 ggaactgtgc acaaaggagt gtggatccct gaggggtgaat caatcaagat tccagtctgc 2220
68 attaaagtca ttgaggacaa gagtggacgg cagagttttc aagctgtgac agatcatatg 2280
69 ctggccattg gcagcctgga ccatgcccac attgtaaggc tgctgggact atgccagggg 2340
70 tcatctctgc agcttgtcac tcaatatttg cctctggggt ctctgctgga tcatgtgaga 2400
71 caacaccggg gggcactggg gccacagctg ctgctcaact ggggagtaca aattgccaag 2460
72 ggaatgtact accttgagga acatgggtat gtgcatagaa acctggctgc ccgaaacgtg 2520
73 ctactcaagt caccagtcga gggtcaggtg gcagattttg gtgtggctga cctgctgcct 2580
74 cctgatgata agcagctgct atacagttag gccaaagact caattaagt gatggccctt 2640
75 gagagtatcc actttgggaa atacacacac cagagtgtat tctggagcta tgggtgtgaca 2700
76 gtttgggagt tgatgacctt cggggcagag ccctatgcag ggctacgatt ggctgaagta 2760
77 ccagacctgc tagagaaggg ggagcgggtg gcacagcccc agatctgcac aattgatgtc 2820
78 tacatggtga tgggtcaagt ttggatgatt gatgagaaca ttcgcccac ctttaaagaa 2880
79 ctagccaatg agttcaccag gatggccga gacccaccac ggtatctggt cataaagaga 2940
80 gagagtgggc ctggaatagc ccctgggcca gagccccatg gtctgacaaa caagaagcta 3000
81 gaggaagtag agctggagcc agaactagac ctagacctag acttgggaagc agaggaggac 3060
82 aacctggcaa ccaccacact gggctccgcc ctcagcctac cagttggaac acttaatcgg 3120
83 ccacgtggga gccagagcct tttaagtcca tcatctggat acatgcccac gaaccagggt 3180
84 aatcttgggg ggtcttgcca ggagtctgca gtttctggga gcagtgaacg gtgcccccg 3240
85 ccagtctctc tacacccaat gccacgggga tgccctggcat cagagtcac agaggggcat 3300
86 gtaacaggct ctgaggctga gctccaggag aaagtgtcaa tgtgtagaag ccggagcagg 3360
87 agccggagcc caccggcacg cggagatagc gcctaccatt cccagcgcca cagtctgtc 3420
88 actcctgtta cccactctc cccaccggg tttagaggaag aggatgtcaa cggttatgtc 3480
89 atgccagata cacacctcaa aggtactccc tcctccggg aaggcaccct ttcttcagt 3540
90 ggtctcagtt ctgtcctggg tactgaagaa gaagatgaag atgaggagta tgaatacatg 3600
91 aaccggagga gaaggcacag tccacctcat cccctaggc caagttccct tgaggagctg 3660
92 ggttatgagt acatggatgt ggggtcagac ctcagtgcct ctctgggcag cacacagagt 3720
93 tgcccactcc accctgtacc catcatgccc actgcaggca caactccaga tgaagactat 3780
94 gaatatatga atcggaacg agatggaggt ggtcctgggg gtgattatgc agccatgggg 3840
95 gcctgcccag catctgagca agggtatgaa gagatgagag cttttcaggg gcctggacat 3900
96 caggccccc atgtccatta tgccgccta aaaactctac gtagcttaga ggctacagac 3960
97 tctgcctttg ataaccctga ttactggcat agcaggcttt tccccaaggc taatgccag 4020
98 agaacg 4026

```

100 <210> SEQ ID NO: 2

101 <211> LENGTH: 1342

102 <212> TYPE: PRT

103 <213> ORGANISM: Homo sapiens

105 <400> SEQUENCE: 2

106 Met Arg Ala Asn Asp Ala Leu Gln Val Leu Gly Leu Leu Phe Ser Leu

RAW SEQUENCE LISTING

DATE: 07/05/2006

PATENT APPLICATION: US/10/563,888A

TIME: 13:54:48

Input Set : A:\SEQLIST.TXT

Output Set: N:\CRF4\07052006\J563888A.raw

```

107 1          5          10          15
108 Ala Arg Gly Ser Glu Val Gly Asn Ser Gln Ala Val Cys Pro Gly Thr
109          20          25          30
110 Leu Asn Gly Leu Ser Val Thr Gly Asp Ala Glu Asn Gln Tyr Gln Thr
111          35          40          45
112 Leu Tyr Lys Leu Tyr Glu Arg Cys Glu Val Val Met Gly Asn Leu Glu
113          50          55          60
114 Ile Val Leu Thr Gly His Asn Ala Asp Leu Ser Phe Leu Gln Trp Ile
115 65          70          75          80
116 Arg Glu Val Thr Gly Tyr Val Leu Val Ala Met Asn Glu Phe Ser Thr
117          85          90          95
118 Leu Pro Leu Pro Asn Leu Arg Val Val Arg Gly Thr Gln Val Tyr Asp
119          100          105          110
120 Gly Lys Phe Ala Ile Phe Val Met Leu Asn Tyr Asn Thr Asn Ser Ser
121          115          120          125
122 His Ala Leu Arg Gln Leu Arg Leu Thr Gln Leu Thr Glu Ile Leu Ser
123          130          135          140
124 Gly Gly Val Tyr Ile Glu Lys Asn Asp Lys Leu Cys His Met Asp Thr
125 145          150          155          160
126 Ile Asp Trp Arg Asp Ile Val Arg Asp Arg Asp Ala Glu Ile Val Val
127          165          170          175
128 Lys Asp Asn Gly Arg Ser Cys Pro Pro Cys His Glu Val Cys Lys Gly
129          180          185          190
130 Arg Cys Trp Gly Pro Gly Ser Glu Asp Cys Gln Thr Leu Thr Lys Thr
131          195          200          205
132 Ile Cys Ala Pro Gln Cys Asn Gly His Cys Phe Gly Pro Asn Pro Asn
133          210          215          220
134 Gln Cys Cys His Asp Glu Cys Ala Gly Gly Cys Ser Gly Pro Gln Asp
135 225          230          235          240
136 Thr Asp Cys Phe Ala Cys Arg His Phe Asn Asp Ser Gly Ala Cys Val
137          245          250          255
138 Pro Arg Cys Pro Gln Pro Leu Val Tyr Asn Lys Leu Thr Phe Gln Leu
139          260          265          270
140 Glu Pro Asn Pro His Thr Lys Tyr Gln Tyr Gly Gly Val Cys Val Ala
141          275          280          285
142 Ser Cys Pro His Asn Phe Val Val Asp Gln Thr Ser Cys Val Arg Ala
143          290          295          300
144 Cys Pro Pro Asp Lys Met Glu Val Asp Lys Asn Gly Leu Lys Met Cys
145 305          310          315          320
146 Glu Pro Cys Gly Gly Leu Cys Pro Lys Ala Cys Glu Gly Thr Gly Ser
147          325          330          335
148 Gly Ser Arg Phe Gln Thr Val Asp Ser Ser Asn Ile Asp Gly Phe Val
149          340          345          350
150 Asn Cys Thr Lys Ile Leu Gly Asn Leu Asp Phe Leu Ile Thr Gly Leu
151          355          360          365
152 Asn Gly Asp Pro Trp His Lys Ile Pro Ala Leu Asp Pro Glu Lys Leu
153          370          375          380
154 Asn Val Phe Arg Thr Val Arg Glu Ile Thr Gly Tyr Leu Asn Ile Gln
155 385          390          395          400

```

RAW SEQUENCE LISTING

DATE: 07/05/2006

PATENT APPLICATION: US/10/563,888A

TIME: 13:54:48

Input Set : A:\SEQLIST.TXT

Output Set: N:\CRF4\07052006\J563888A.raw

```

156 Ser Trp Pro Pro His Met His Asn Phe Ser Val Phe Ser Asn Leu Thr
157          405          410          415
158 Thr Ile Gly Gly Arg Ser Leu Tyr Asn Arg Gly Phe Ser Leu Leu Ile
159          420          425          430
160 Met Lys Asn Leu Asn Val Thr Ser Leu Gly Phe Arg Ser Leu Lys Glu
161          435          440          445
162 Ile Ser Ala Gly Arg Ile Tyr Ile Ser Ala Asn Arg Gln Leu Cys Tyr
163          450          455          460
164 His His Ser Leu Asn Trp Thr Lys Val Leu Arg Gly Pro Thr Glu Glu
165 465          470          475          480
166 Arg Leu Asp Ile Lys His Asn Arg Pro Arg Arg Asp Cys Val Ala Glu
167          485          490          495
168 Gly Lys Val Cys Asp Pro Leu Cys Ser Ser Gly Gly Cys Trp Gly Pro
169          500          505          510
170 Gly Pro Gly Gln Cys Leu Ser Cys Arg Asn Tyr Ser Arg Gly Gly Val
171          515          520          525
172 Cys Val Thr His Cys Asn Phe Leu Asn Gly Glu Pro Arg Glu Phe Ala
173          530          535          540
174 His Glu Ala Glu Cys Phe Ser Cys His Pro Glu Cys Gln Pro Met Gly
175 545          550          555          560
176 Gly Thr Ala Thr Cys Asn Gly Ser Gly Ser Asp Thr Cys Ala Gln Cys
177          565          570          575
178 Ala His Phe Arg Asp Gly Pro His Cys Val Ser Ser Cys Pro His Gly
179          580          585          590
180 Val Leu Gly Ala Lys Gly Pro Ile Tyr Lys Tyr Pro Asp Val Gln Asn
181          595          600          605
182 Glu Cys Arg Pro Cys His Glu Asn Cys Thr Gln Gly Cys Lys Gly Pro
183          610          615          620
184 Glu Leu Gln Asp Cys Leu Gly Gln Thr Leu Val Leu Ile Gly Lys Thr
185 625          630          635          640
186 His Leu Thr Met Ala Leu Thr Val Ile Ala Gly Leu Val Val Ile Phe
187          645          650          655
188 Met Met Leu Gly Thr Phe Leu Tyr Trp Arg Gly Arg Arg Ile Gln
189          660          665          670
190 Asn Lys Arg Ala Met Arg Arg Tyr Leu Glu Arg Gly Glu Ser Ile Glu
191          675          680          685
192 Pro Leu Asp Pro Ser Glu Lys Ala Asn Lys Val Leu Ala Arg Ile Phe
193          690          695          700
194 Lys Glu Thr Glu Leu Arg Lys Leu Lys Val Leu Gly Ser Gly Val Phe
195 705          710          715          720
196 Gly Thr Val His Lys Gly Val Trp Ile Pro Glu Gly Glu Ser Ile Lys
197          725          730          735
198 Ile Pro Val Cys Ile Lys Val Ile Glu Asp Lys Ser Gly Arg Gln Ser
199          740          745          750
200 Phe Gln Ala Val Thr Asp His Met Leu Ala Ile Gly Ser Leu Asp His
201          755          760          765
202 Ala His Ile Val Arg Leu Leu Gly Leu Cys Pro Gly Ser Ser Leu Gln
203          770          775          780
204 Leu Val Thr Gln Tyr Leu Pro Leu Gly Ser Leu Leu Asp His Val Arg

```

RAW SEQUENCE LISTING

DATE: 07/05/2006

PATENT APPLICATION: US/10/563,888A

TIME: 13:54:48

Input Set : A:\SEQLIST.TXT

Output Set: N:\CRF4\07052006\J563888A.raw

205	785				790				795				800			
206	Gln	His	Arg	Gly	Ala	Leu	Gly	Pro	Gln	Leu	Leu	Leu	Asn	Trp	Gly	Val
207					805				810						815	
208	Gln	Ile	Ala	Lys	Gly	Met	Tyr	Tyr	Leu	Glu	Glu	His	Gly	Met	Val	His
209					820				825						830	
210	Arg	Asn	Leu	Ala	Ala	Arg	Asn	Val	Leu	Leu	Lys	Ser	Pro	Ser	Gln	Val
211					835				840						845	
212	Gln	Val	Ala	Asp	Phe	Gly	Val	Ala	Asp	Leu	Leu	Pro	Pro	Asp	Asp	Lys
213					850				855						860	
214	Gln	Leu	Leu	Tyr	Ser	Glu	Ala	Lys	Thr	Pro	Ile	Lys	Trp	Met	Ala	Leu
215	865					870						875				880
216	Glu	Ser	Ile	His	Phe	Gly	Lys	Tyr	Thr	His	Gln	Ser	Asp	Val	Trp	Ser
217					885							890				895
218	Tyr	Gly	Val	Thr	Val	Trp	Glu	Leu	Met	Thr	Phe	Gly	Ala	Glu	Pro	Tyr
219					900				905						910	
220	Ala	Gly	Leu	Arg	Leu	Ala	Glu	Val	Pro	Asp	Leu	Leu	Glu	Lys	Gly	Glu
221					915				920						925	
222	Arg	Leu	Ala	Gln	Pro	Gln	Ile	Cys	Thr	Ile	Asp	Val	Tyr	Met	Val	Met
223					930				935						940	
224	Val	Lys	Cys	Trp	Met	Ile	Asp	Glu	Asn	Ile	Arg	Pro	Thr	Phe	Lys	Glu
225	945					950						955				960
226	Leu	Ala	Asn	Glu	Phe	Thr	Arg	Met	Ala	Arg	Asp	Pro	Pro	Arg	Tyr	Leu
227					965						970					975
228	Val	Ile	Lys	Arg	Glu	Ser	Gly	Pro	Gly	Ile	Ala	Pro	Gly	Pro	Glu	Pro
229					980				985						990	
230	His	Gly	Leu	Thr	Asn	Lys	Lys	Leu	Glu	Glu	Val	Glu	Leu	Glu	Pro	Glu
231					995				1000					1005		
232	Leu	Asp	Leu	Asp	Leu	Asp	Leu	Glu	Ala	Glu	Glu	Asp	Asn	Leu	Ala	Thr
233					1010				1015					1020		
234	Thr	Thr	Leu	Gly	Ser	Ala	Leu	Ser	Leu	Pro	Val	Gly	Thr	Leu	Asn	Arg
235	1025					1030						1035				1040
236	Pro	Arg	Gly	Ser	Gln	Ser	Leu	Leu	Ser	Pro	Ser	Ser	Gly	Tyr	Met	Pro
237					1045						1050					1055
238	Met	Asn	Gln	Gly	Asn	Leu	Gly	Gly	Ser	Cys	Gln	Glu	Ser	Ala	Val	Ser
239					1060				1065						1070	
240	Gly	Ser	Ser	Glu	Arg	Cys	Pro	Arg	Pro	Val	Ser	Leu	His	Pro	Met	Pro
241					1075				1080					1085		
242	Arg	Gly	Cys	Leu	Ala	Ser	Glu	Ser	Ser	Glu	Gly	His	Val	Thr	Gly	Ser
243					1090				1095					1100		
244	Glu	Ala	Glu	Leu	Gln	Glu	Lys	Val	Ser	Met	Cys	Arg	Ser	Arg	Ser	Arg
245	1105					1110					1115					1120
246	Ser	Arg	Ser	Pro	Arg	Pro	Arg	Gly	Asp	Ser	Ala	Tyr	His	Ser	Gln	Arg
247					1125						1130					1135
248	His	Ser	Leu	Leu	Thr	Pro	Val	Thr	Pro	Leu	Ser	Pro	Pro	Gly	Leu	Glu
249					1140						1145				1150	
250	Glu	Glu	Asp	Val	Asn	Gly	Tyr	Val	Met	Pro	Asp	Thr	His	Leu	Lys	Gly
251					1155				1160					1165		
252	Thr	Pro	Ser	Ser	Arg	Glu	Gly	Thr	Leu	Ser	Ser	Val	Gly	Leu	Ser	Ser
253					1170				1175					1180		

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 07/05/2006
PATENT APPLICATION: US/10/563,888A TIME: 13:54:49

Input Set : A:\SEQLIST.TXT
Output Set: N:\CRF4\07052006\J563888A.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:14; N Pos. 35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54

Seq#:14; N Pos. 55,56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,71,72,73,74

Seq#:14; N Pos. 75,76,77,78,79,80,81,82,83

VERIFICATION SUMMARY

DATE: 07/05/2006

PATENT APPLICATION: US/10/563,888A

TIME: 13:54:49

Input Set : A:\SEQLIST.TXT

Output Set: N:\CRF4\07052006\J563888A.raw

L:727 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:731 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:14
L:732 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14 after pos.:0
M:341 Repeated in SeqNo=14